Architect of the Capitol
April 1997

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
	1 2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
001	**June 5 2006**		

6. ISSUED BY	7. ADDRESS AMENDMENT/MODIFICATION TO
ARCHITECT OF THE CAPITOL United States Capitol Washington, D.C. 20515	Architect of the Capitol Procurement Division Ford House Office Building Attn:John Friedhoff Room H2-263 Second and "D" Streets, S.W. Washington, DC 20515

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		9A. AMENDMENT OF SOLICITATION NO. RFP No. 060115
	(X)	9B. DATED (See Item 11) May 31, 2006
		10A. MODIFICATION OF CONTRACT/ORDER NO.
CODE / FACILITY CODE		10B. DATED (See Item 13)

SUBJECT: **Copyright Office Move Reconfiguration, WASHINGTON, DC**

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offers **XXX** is extended, _ is not extended. **THE DUE DATE FOR PROPOSALS IS JULY 11, 2006 AT 1PM EST.**

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and return __3__ copies of the amendment; (b) By acknowledging receipt of this amendment in Block 12 of Page 1 of the solicitation package, giving amendment number and its date; or ©) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter make reference to the solicitation and this amendment, and is received prior to the opening/receipt hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor _____ is not, _____ is required to sign this document and return it to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION

1. SEE CONTINUATION PAGES.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA By _____ (Signature of Contracting Officer)	16C. DATE SIGNED

A. This Amendment No. 001 is issued to include Section 15900 - INSTRUCTION AND CONTROLS that was omitted from the solicitation. **Also the due date for proposal is corrected to JULY 11, 2006 at 1PM EST**. All other terms and conditions remain the same.

_____

Attachments:

Section 15900 (10 pages)

Distribution:

Contract File
COTR -

SECTION 15900 - INSTRUMENTATION AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes control equipment for HVAC systems and components, including control components for terminal heating and cooling units not supplied with factory-wired controls.

1.3 SYSTEM DESCRIPTION

A. Control system consists of sensors, indicators, actuators, final control elements, interface equipment, other apparatus, accessories and wiring.

1.4 SUBMITTALS

A. Product Data: Include manufacturer's technical literature for each control device. Indicate dimensions, capacities, performance characteristics, electrical characteristics, finishes for materials, and installation and startup instructions for each type of product indicated.

B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

1. Schematic flow diagrams showing dampers and control devices.
2. Wiring Diagrams: Power, signal, and control wiring. Differentiate between manufacturer-installed and field-installed wiring. Show termination points at all devices.

3. Written description of sequence of operation with component identification, not just copies of drawing sequence of opertion.

C. Qualification Data: For firms and persons specified in “Quality Assurance” Article.

D. Project Record Documents: Record actual locations of control components, including control units, thermostats and sensors. Review Shop Drawings to reflect actual installation and operating sequences. Field quality-control test reports.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installed who is a certified installer of the automatic control system manufacturer for both installation and maintenance of units required for this Project.

B. Manufacturer Qualifications: A firm experienced in manufacturing automatic temperature-control systems similar to those indicated for this project and with a record of successful in-service performance.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

D. Comply with NFPA 90A, “Installation of Air Conditioning and Ventilation Systems.”

E. Comply with ASHRAE 135 for DDC system components.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Factory-Mounted Components: Where control devices specified in this Section are indicated to be factory mounted on equipment, under other sections, arrange for shipping of control devices to equipment manufacturer.

1.7 COORDINATION

A. Coordinate location of thermostats, humidistats, and other exposed control sensors with plans and room details before installation.

B. Coordinate supply of conditioned electrical branch for control units and operator workstation with Division 16, where additional circuits or dedicated circuits are required, provide under this section in accordance with the requirements of Division 16.

C. Coordinate equipment with Division 16 Section covering Motor-Control Centers and Panelboards to achieve compatibility with motor starts and annunciation devices.

D. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement and formwork requirements are specified in Division 3 Section "Cast-in-Place Concrete."

E. Coordinate factory installation of terminal unit controllers furnished under this section where specified under Terminal Unit Controllers.

1.8 EXISTING CONTROLS

A. The Contractor is to provide a unit cost as a line item to replace terminal box controls that are found not working. During construction, provide price to repair one terminal box. Include in price pneumatic controller, T-stat and primary air actuator.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Submit to compliance with requirements, provide products by one of the following:

1. Control Systems Components:

a. Honeywell, Inc.
b. Invensys Building Systems.
c. Johnson Controls, Inc.;' Controls Group.
d. Siemens Building Technologies.

2.2 SYSTEM REQUIREMENTS

A. Provide materials and installation labor necessary to connect to components factory supplied under other sections, as part of equipment controlled.

B. Unless specified otherwise, provide fully modulating output devices operating valves and dampers.

2.3 SENSOR

A. Pneumatic Temperature Sensors: Vibration and corrosion resistant; for wall-mounting as required.

1. Pneumatic Temperature Sensors:

a. Accuracy: Plus or minus 0.5 deg. F. (0.3 deg. C.) At calibration point.
b. Room Sensors: Secure cover with setpoint adjustment.

2.4 ACTUATORS

A. Pneumatic Damper Operators: Rolling-diaphragm, piston type with adjustable stops and spring return, sized to operate with sufficient reserve power to provide smooth modulating action or two-position action. Where actuators operate in sequence, provide pilot positioners.

1. Pilot Positioners: Start point adjustable from 2 to 12 psig (14 to 83 kPa) and operating span adjustable from 3 to 13 psig (35 to 90 kPa).

2.5 AIR SUPPLY

A. Control and Instrumentation Tubing: Type K, seamless copper tubing complying with ASTM B 88 (ASTM B 88M) or Type ACR, copper tubing complying with ASTM B 280.

1. Fittings: Cast-bronze solder fittings complying with ASME B16.18; or wrought-copper solder fittings complying with ASME B16.22, except forged-brass compression-type fittings at connections to equipment.
2. Joining Method: Soldered or brazed.

B. Instrument Pressure Gages: Black letters on white background, 1-1/2 inches (38 mm) in diameter, stem mounted, with suitable dial range.

C. Diaphragm Control and Instrument Valves: 1/4-inch (6-mm) forged-brass body with reinforced polytetrafluoroethylene diaphragm, stainless-steel spring, and color-coded phenolic handle.

D. Gage Cocks: Tee or level handle, bronze, rated for 125 psig (860 kPa).

E. Relays: For summing, reversing, and amplifying highest or lowest pressure selection; with adjustable I/O ratio.

F. Switches: With indicating plates and accessible adjustment; calibrated and marked.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that conditioned power supply is available to control units and operator workstation.

B. Verify that pneumatic piping and duct-, pipe-, and equipment-mounted devices are installed before proceeding with installation.

3.2 INSTALLATION

A. Install equipment level and plumb.

B. Connect and configure equipment and software to achieve sequence of operation specified.

C. Verify location of thermostats and exposed control sensors with plans and room details before installation. Locate all 60 inches (1524 mm) above the floor.

D. Install labels and nameplates to identify control components according to Division 15 Section "Mechanical Identification."

E. Install duct volume-control dampers according to Division 15 Sections specifying air ducts.

3.3 PNEUMATIC PIPING INSTALLATION

A. Install Type FR piping in mechanical equipment rooms inside mechanical equipment enclosures, in pipe chases, or suspended ceilings with easy access.

1. Install copper tubing with maximum unsupported length of 36 inches (915 mm), for tubing exposed to view.

B. Install terminal single-line connections, less than 18 inches (460 mm) in length, without protection.

C. In concealed locations such as pipe chases and suspended ceilings with easy access, install copper tubing.

D. Number-code or color-code control air piping for future identification and service of control system, except local individual room control tubing.

E. Pressure Gages or Test Plugs: Install on branch lines at each receiver controller and on signal lines at each transmitter, except individual room controllers.

3.4 CONNECTIONS

A. Piping installation requirements are specified in other Division 15 Sections. Drawings indicate general arrangement of piping, fittings and specialties.

1. Install piping adjacent to machine and allow service and maintenance.

B. Ground Equipment:

1. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

C. Install signal and communication cable according to Division 16 Section "Voice and Data Communication Cabling."

1. Conceal cable, except in mechanical rooms and areas where other conduit and piping are exposed.
2. Install exposed cable in raceway.
3. Install concealed cable in raceway.
4. Bundle and harness multiconductor instrument cable in place of single cables where several cables follow a common path.
5. Fasten flexible conductors, bridging cabinets and doors, along hinge side; protect against abrasion. Tie and support conductors.

6. Number-code or color-code conductors for future identification and service of control system, except local individual room control cables.
7. Install wire and cable with sufficient slack and flexible connections to allow for vibration of piping and equipment.

D. Connect manual-reset limit controls independent of manual-control switch positions. Automatic duct heater resets may be connected in interlock circuit of power controllers.

E. Connect hand-off-auto selector switches to override automatic interlock controls when switch is in hand position.

3.5 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including piping and electrical connections. Report results in writing.

1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
2. Operational Test: After electrical circuitry has been energized, start units to confirm proper unit operation. Remove malfunctioning units, replace with new units and retest.
3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment and retest.
4. Pressure test control air piping at 30 psig (207 kPa) or 1.5 times the operating pressure for 24 hours, with maximum 5-psig (35-kPa) loss.
5. Pressure test high-pressure control air piping at 150 psig (1034 kPa) and low-pressure control air piping at 30 psig (207 kPa) for 2 hours, with maximum 1-psig (7-kPa) loss.
6. Calibration test pneumatic controllers by disconnecting input sensors and stimulating operation with compatible signal generator or by changing control points at Operator’s Workstation.

B. Engage a factory-authorized service representative to perform start-up service.

C. Replace damaed or malfunctioning controls and equpment and repeat testing procedures.

3.6 ACCEPTANCE TESTING

A. Completely check out, calibrate and test all connected hardware and software to insure that the system performs in accordance with the approved specifications and sequences of operations.

B. Provide the necessary technicians to demonstrate to a group including the Owner and his designated representatives each type of data entry to show site specific customizing capability; demonstrate parameter changes; execute digital and analog commands; and demonstrate DDC loop stability via trend of inputs and outputs.

C. All operating equipment installed under this Division shall be placed in operation and shall function continuously in an operating test for a period of twenty-eight (28) days prior to Owner acceptance and after all testing and balancing is complete, without shutdown due to mechanical failure or necessity of adjustment. Prior to scheduling the Project Final Inspection and after completion of all installation and running adjustments, perform balancing and any other work required to place the equipment in complete operating condition to meet all requirements. During this running test period, deliver to the designated representative of the Owner, through the Architect, two complete sets of operating and maintenance or replacement. One copy of the manual shall be available during the instruction of the operating personnel while the other is reviewed by the Architect. During all working hours of the "twenty-eight (28) day operating test" instruction, provide thorough and detailed training to the Owner's operating and maintenance personnel in the service, operation, maintenance and adjustment of all equipment and systems installed.

3.7 COMMISSIONING

A. Provide a control technician/engineer to perform the following commissioning test. Keep records of each test performed, who witnessed the tests, date and any notes to explain discrepancies. .

1. After acceptance of the control system, the Owner's representatives will select approximately 25% of the installed control inputs and outputs to confirm proper connection, naming (in software), calibration, etc. If any failures occur, the number of control points examined will be expanded as determined by the Owner's representative.
2. Demonstrate to Owner's representatives, every control sequence. Before the demonstration, submit for approval, the proposed, detailed method of demonstrating each sequence. Where discrepancies are found, make corrections as promptly as

possible and resume the commissioning process. For example: To demonstrate morning start-up of an air handling unit, the procedure might be as follows:

a. With 6:00 am. Start-up time scheduled, set clock to 5:59 a.m. and confirm that the air handling unit supply and return fans are off, outside air and smoke dampers are closed, chilled water and heating water coil control valves are closed.
b. At 6:00 a.m. the signal is given to start the supply and return fans. First, the smoke dampers must open and prove so through an end switch. Upon unit start-up, the fans start, but the outside air damper remains closed. The unit discharge air temperature is controlled at the proper temperature (er the sequence of operation).

3. Failure of any test to confirm proper system operation shall require that the hardware or software be corrected. After corrections have bene made, the test will be resumed until successfully completed.
4. Upon satisfactory completion of the acceptance tests, place a final copy in the Operating and Maintenance Manuals.

3.8 MANUALS

The following manuals will be provided:

A. Provide an Operator's Manual with graphic explanation of keyboard use for all operator functions specified under Operator Training.

B. Provide a manual including revised as-built documents of all materials required under the paragraph "SUBMITTALS" on this specification.

C. Provide two Operator's Manuals and two As-Built Manuals to the Owner.

3.9 OPERATOR TRAINING

A. Provide all training and utilize Operator's Manual and As-Built documentation.

B. Operator training shall include two 4-hour sessions encompassing modifying text and graphics, sequence of operation review, selection of all displays and reports, use of all specified workstation functions, use of Portable Operator's Terminals, troubleshooting of sensors (determining bad sensors) and password assignment and modification.

C. One training session shall be conducted at system completion and the other shall be conducted forty-five days after system completion.

3.10 WARRANTY

A. Guarantee all components, system hardware and parts against defects in materials and workmanship for one year from acceptance date. Provide labor to repair, reprogram or replace components at no charge during the warranty period. Update all corrective software modifications made during warranty periods shall be updated on all user documentation and on user and manufacturer achieved software disks.

3.11 ON-SITE ASSISTANCE Occupancy Adjustments: Within one year of the date of Substantial Completion, provide up to three Project site visits, when requested by Owner, to adjust and calibrate components and to assist Owner's personnel in making program changes and in adjusting sensors and controls to suit actual conditions.

END OF SECTION 15900